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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/542,649

07/19/2005

Shoji Ito

Q89230

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23373

7590

07/27/2007

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EXAMINER

PHAN, THIEM D

ART UNIT

PAPER NUMBER

3729

MAIL DATE

DELIVERY MODE

07/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/542,649

Applicant(s)

ITO ET AL.

Examiner

Tim Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-45 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DEADLINE

Election/Restrictions

1. Applicants' election with traverse of Group II, filed on 6/14/07 is acknowledged and upon further consideration by the examiner, the previous Restriction requirement (filed on 5/15/07) has been withdrawn in view of the following Restriction.

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicants are required, in reply to this action, to elect a single invention to which the claims must be restricted.

- I. Claims 1-14, 20-26, 29-32, 36-42, 37 and 45, drawn to multilayer printed wiring boards;
 - II. Claims 15-19, 27, 28, 33-35, 43 and 44 drawn to methods for manufacturing multilayer printed wiring boards.
2. The inventions listed as Groups I and II do not relate to a single general inventive concept

under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical features of group I include a mother board, a base material with wiring circuit and an inner via hole connecting the motherboard and the base material. In contrast, the special technical features of group II include the steps of laminating a base material having wiring circuit to a motherboard and further comprises a step of forming a via hole.

3. Further, the invention of Group I contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1. The species have different structural arrangement.

The disclosure is unclear in setting forth how many species are contemplated by the application as various species with different combinations are disclosed. As best understood by the examiner, the following species requirement is formulated:

- | | |
|-----------|------------|
| Species 1 | Figure 1. |
| Species 2 | Figure 5. |
| Species 3 | Figure 6. |
| Species 4 | Figure 7. |
| Species 5 | Figure 8. |
| Species 6 | Figure 9. |
| Species 7 | Figure 10. |

Species 8 Figure 15.

Species 9 Figure 20.

Species 10 Figure 23.

Species 11 Figure 26.

Species 12 Figure 27.

Species 13 Figure 32.

Species 14 Figure 36.

4. If applicants elect the invention of Group II, a further Restriction is required:

 This application contains claims directed to the following patentably distinct species of the claimed invention in Group II:

Species I: An embodiment of a method of manufacturing a multilayer wiring board with a distinct limitation of laminating a base material with wiring circuit formed into a predetermined outer shape with at least one of the surface and rear surface of the motherboard, Claims 15-19 and 27;

Species II: An alternative embodiment of a method of manufacturing a multilayer wiring board with a distinct limitation of preparing a resin plate, Claim 28;

Species III: Another embodiment of a method of manufacturing a multilayer wiring board with a distinct limitation of removing a portion of the insulating base material of the main single-sided circuit board, Claims 33-35;

Species IV: An alternative embodiment of a method of manufacturing a multilayer

wiring board with a distinct limitation of an adhesive insulating base,

Claim 43;

Species V: An alternative embodiment of a method of manufacturing a multilayer

wiring board with a distinct limitation of an interlayer bonding layer,

Claim 44;

5. Applicants are required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, it appears that there is no generic claim.

Since the Restriction Requirement is complex and the examiner knows from past experience that a telephone election will not be made, therefore there is no phone call to the applicants and the examiner proceeds directly to a written restriction requirement.

Applicants are advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

If claims are added after the election, applicants must indicate which are readable upon the elected species. MPEP § 809.02(a).

Applicants are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

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application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. Applicants are advised that the reply to this requirement to be complete must include (i) an election of a species to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of a species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicants traverse on the ground that the species are not patentably distinct, applicants should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

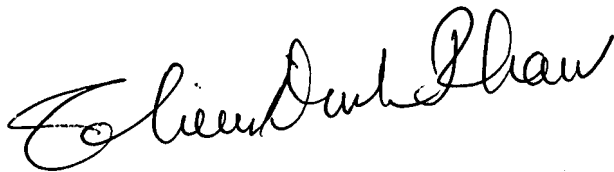
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Phan whose telephone number is 571-272-4568. The examiner can normally be reached on M & Tu, 6AM - 2PM, and W & Th, 9AM – 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the

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organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Tim Phan", written in a cursive style.

Tim Phan
Examiner
Art Unit 3729

tp
July 23, 2007